ABSTRACT

The present invention is a data processing system, which comprises a microprocessor. The microprocessor comprises a central processing unit (CPU) and a built-in non-volatile program memory for storing a startup program. The system

5 further comprises a volatile memory, a permanent memory for storing an application program permanently, a bus connected to the microprocessor, the volatile memory and the permanent memory, and a power supply for providing power to the data processing system. While the switch of the power supply is turned on, the startup program stored in the non-volatile program memory is initialized first to transmit the

10 application program stored in the permanent memory to the volatile memory via the bus, so that the CPU only needs to call and execute the application program in the volatile memory, instead of the permanent memory, and doesn't need to read the permanent memory repeatedly to avoid reducing the system efficiency.